

## CLAIMS

1. A process for producing a coated sheet in which a support or an undercoat layer superimposed on the support is coated with a coating liquid containing a thermosensitive polymeric compound reversibly exhibiting hydrophilicity and hydrophobicity depending on temperature change, characterized by comprising:

a step of applying on the support or the undercoat layer superimposed on the support a treatment liquid whose temperature is in a range in which the thermosensitive polymeric compound exhibits hydrophilicity; and

a step of applying the coating liquid containing the thermosensitive polymeric compound concurrently with the application of the treatment liquid or after the application of the treatment liquid without drying after the application.

2. A process for producing a coated sheet according to claim 1, wherein the coating liquid containing the thermosensitive polymeric compound is thickened or gelatinized at a temperature within a range in which the thermosensitive polymeric compound exhibits hydrophilicity.

3. A process for producing a coated sheet according to claim 1 or 2, wherein a solvent of the treatment liquid is water.

4. A process for producing a coated sheet according to any one of claims 1 to 3, wherein the treatment liquid comprises at least one selected from the group consisting of cationic polymers and water-soluble polyvalent metal salts.

5. A process for producing a coated sheet according to any one of claims 1 to 4, wherein the coating liquid containing the thermosensitive polymeric compound comprises a pigment.

6. A process for producing a coated sheet according to any one of claims 1 to 5, wherein the coating liquid containing the thermosensitive polymeric compound comprises a cationic compound.
7. A process for producing a coated sheet according to any one of claims 1 to 6, wherein the thermosensitive polymeric compound exhibits hydrophobicity at a temperature no lower than a thermosensitive point thereof but exhibits hydrophilicity at a temperature no higher than the thermosensitive point.
8. A process for producing a coated sheet according to claim 7, wherein the temperature of the coating liquid is lower than the thermosensitive point of the thermosensitive polymeric compound by 10°C or more.
9. A process for producing a coated sheet according to any one of claims 1 to 8, wherein the coating liquid containing the thermosensitive polymeric compound comprises inorganic fine particles.
10. A process for producing a coated sheet according to any one of claims 1 to 9, wherein after a porous layer comprising inorganic fine particles and a binder as main components thereof is formed on the support, the treatment liquid is applied and the coating liquid containing the thermosensitive polymeric compound is applied.
11. A process for producing a coated sheet according to any one of claims 1 to 10, comprising a step in which after the coating liquid containing the thermosensitive polymeric compound is applied, the resultant material is brought into contact with and pressed against a mirror-finished drum and dried.
12. A process for producing a coated sheet according to any one of claims 1 to 11, comprising a step in which a coating fluid containing colloidal fine particles as a main

component thereof is further applied onto a coating layer in which the coating liquid containing the thermosensitive polymeric compound is dried.

13. A process for producing a coated sheet according to any one of claims 1 to 12, wherein the coated sheet is a recording sheet.

14. A process for producing a coated sheet according to any one of claims 1 to 13, wherein the coated sheet is an inkjet recording sheet.

15. A process for producing an inkjet recording coated sheet, in which a porous layer containing inorganic fine particles and a binder as main components thereof is formed on a support, and then a coating liquid containing a thermosensitive polymeric compound reversibly exhibiting hydrophilicity and hydrophobicity depending on temperature change and inorganic fine particles is applied, characterized by comprising:  
a step of applying on the porous layer a treatment liquid whose temperature is in a range in which the thermosensitive polymeric compound exhibits hydrophilicity; and  
a step of applying the coating liquid containing the thermosensitive polymeric compound and the inorganic fine particles concurrently with the application of the treatment liquid or after the application of the treatment liquid without drying after the application.

16. A process for producing a coated sheet according to claim 15, wherein the porous layer has peaks in a pore distribution curve within each range of 0.1 to 10  $\mu\text{m}$  and 0.5  $\mu\text{m}$  or less, and a pore volume of 0.5 ml/g or more.